

In re Application of: Giora AMITZUR et al  
Serial No.: 10/537,913  
Filed: December 6, 2005  
Office Action Mailing Date: February 6, 2007

Examiner: Zoe E. Baxter  
Group Art Unit: 3735  
Attorney Docket: 30028

### **REMARKS**

Reconsideration of the above-identified application in view of the amendments above and the remarks following is respectfully requested.

Claims 1-60 are in this Application. Claims 1-55 have been rejected under 35 U.S.C. § 101. Claims 1, 3, 4, 5, 19, 26 – 30, 34 and 43 have been rejected under 35 U.S.C. § 102. Claims 15-17, 35, 38, 39 and 40 have been rejected under 35 U.S.C. § 103. Claims 1, 5, 6, 9, 15, 16, 26, 33, 39, and 52 - 55 have been amended herewith. New claims 56-60 have been added herewith. Claims 1, 26 and 45 are independent. **It is noted that no art rejection was made against independent claim 45.**

#### **35 U.S.C. § 101 Rejections**

Claims 1-55 have been rejected under 35 U.S.C. §101 as not providing a tangible result. The Examiner suggested that "in order for the results to be tangible they must be displayed on a physical medium".

Independent claim 1 has been amended herewith to recite "displaying at least an indication of the endothelial dependent vasoactivity of the subject";

independent claim 26 was amended to recite that the processing unit is "configured to display results of said processing"; and

independent claim 45 was amended to recite "displaying at least an indication of the endothelial dependent vasoactivity of the subject".

Support to these amendments may be found, for instance on page 29 lines 7-12 it is described that

"A first prototype system has been designed and constructed. The system included (i) transducers and an amplifier, designed and assembled for the research; (ii) a processing unit (desktop computer, Pentium IV); (iii) an A/D sampling card, purchased from National Instruments DAQ NI-488. 2; (iv) data acquisition software, purchased from National

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Instruments Labview 5. 1. 1, custom designed; and (v) data analysis software, purchased from Matlab™, custom designed."

It is submitted that using a desktop computer (and especially so when it runs a Matlab™ data analysis software) inherently discloses "a processing unit ... configured to display results of said processing" as currently recited in claim 26, and that in the context of the application, the results of said processing includes "at least an indication of the endothelial dependent vasoactivity of the subject" as recited in claims 1 and 45.

35 U.S.C. § 102 Rejections

Claims 1, 3, 4, 5, 19, 26 – 30, 34 and 43 have been rejected under 35 U.S.C. § 102(e) as anticipated by Schnall et al (US Patent No. 6939304).

Independent claim 1 has been amended herewith to recite that the extracted parameters comprise "a first parameter, sensitive to arterial radius changes at the initial stage of arterial dilatation, and a second parameter, sensitive to arterial radius changes at larger arterial dilatation".

Independent claim 26 has been amended herewith along similar lines.

Support for the amendments made in claims 1 and 26 may be found, for instance, on the paragraph bridging pages 16 and 17 of the application as filed, reading:

"For example, due to collagen fiber recruitment in the arterial wall which is increased during the dilatation stage of the artery, the elapsed time parameter is sensitive to arterial radius changes at the initial stage of arterial dilatation, and the amplitude parameter is sensitive to arterial radius changes at relatively large arterial dilatation. Thus, a judicious use of the

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elapsed time parameter and the amplitude parameter allows an accurate and reliable measurement of changes in the arterial radius at a wide range of values.”

The amendments are also supported, for instance, on page 42 lines 15 to 16 of the application as filed, reading:

“With the addition of pulse wave amplitude to the analysis, sensitivity to changes in artery diameter even beyond the "physiological window" was found.”

The Examiner analyzed in detail the relevance of Schnall et al. to the rejected claims. However Schnall et al. does not teach extracting "a first parameter, sensitive to arterial radius changes at the initial stage of arterial dilatation, and a second parameter, sensitive to arterial radius changes at larger arterial dilatation" and using these parameters "to determine a change..., said change being representative of endothelial functioning". Accordingly, Schnall et al does not teach all the limitations of the claims, and the claim is prima facie novel over Schnall et al.

35 U.S.C. § 103 Rejections

Claims 15 and 35 have been rejected as being unpatentable over Schnall et al. in view of Nasiff (US Patent No. 5111826).

Claims 16, 17, 39, and 40 have been rejected as being unpatentable over Schnall et al. in view of Robillard (US Patent No. 3623476).

However, these claims are all dependent, directly or indirectly, either on claim 1 or on claim 26, which are patentable of Schnall et al as explained above.

Neither Nasiff nor Robillard are relevant to the patentability of the independent claims, and indeed, neither of them was cited against any independent claim. The rejected dependent claims are at least patentable in virtue of their parent claims. Nasiff and Robillard do not describe, and are not cited to describe, the elements existing in claims 1 and 26 and missing from Schnall et al.

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Voluntari amendments

Further to the amendments discussed above in relation to the rejections, the claims have been voluntarily amended herewith, as follows:

Claims 33 and 39 have been amended to correct clerical errors;

Claims 5, 6, 9, 15, 16, 52, 54, and 55 have been amended to improve their consistency with the description by replacing the terms "is by" or "are" with the terms "comprises" or "comprise at least one". These amendments broaden the claims.

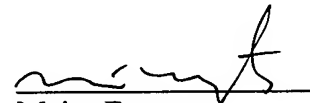
Claim 36 was broadened to relate to any ECG lead, and claim 60 was added for a lead designed to be connectable to a chest of the subject, in line with original claim 36.

New claims 56-59 were added to particularly claim certain embodiments of the invention.

Support to these new claims may be found, for instance, on the paragraph bridging pages 16 and 17 of the application as filed, that was cited above to support the amendments made in claim 1.

In view of the above amendments and remarks it is respectfully submitted that claims 1-60 are now in condition for allowance. A prompt notice of allowance is respectfully and earnestly solicited.

Respectfully submitted,



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Date: May 28, 2007

Enclosures:

- Petition for Extension (1 Month)
- Additional Claims Transmittal Fee